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AFT to CDR-0546

13 July 1959

MEMORANDUM FOR THE RECORD

SUBJECT: The Meeting of July 9 at BMD in Los Angeles

Attendance: BMD - [redacted] 25X1

ARPA

LOCKHEED: [redacted]

STL - [redacted] and at least 5 others.

In addition there were some 10 to 15 unidentified individuals. I was told that the attendance was only partly cleared for CORONA.

1. The purpose of the meeting was to consider and, if possible, to reaffirm in the light of STL's investigation the decisions reached at the earlier progress review meeting to conduct Flight VI on a "medium risk" basis using RJ-1 fuel and with some weight reduction in the system.

2. Lockheed, through [redacted] 25X1 indicated a 90% plus confidence factor (aside from reliability) for Flight VI assuming:

a. Altitude 120 miles

b. Eccentricity of .05

c. Use of RJ-1 fuel (equivalent weight reduction) 60 lbs.

d. 170° azimuth " " " 20 lbs.

e. Reductions in weight (see attachment) 63 lbs.

TOTAL 143 lbs.

3. STL, in commenting on the Lockheed recommendations, indicated that the last flight ran 200 ft per second less velocity than the Lockheed figure but agreed that the difficulties in interpreting the scanty track data could account for the difference in the two figures.

4. STL had not had the opportunity to consult with Lockheed prior to the meeting and had therefore assumed the previous eccentricity of

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.01 in preparing their recommendations for Flight VI. On the same assumptions otherwise (RJ-1 fuel, 170° azimuth, 63 lbs. weight reduction) and further assuming a 5 day life, STL's confidence factor was less than 40%. Their recommendation was to seek higher altitude from the system, retain the lower eccentricity, and to seek improved performance in both the Thor and the Bell Rustler in certain specified areas.

25X1

5. [redacted] also emphasized strongly the need for RJ-1 engine testing in the extreme range of mixture ratios to be encountered during the flight.

6. As the meeting closed there appeared to be agreement between the parties that:

a. Lockheed would increase its weight reduction another 14 lbs. This would be derived from eliminating H-2 bottle and certain grid mountings.

b. STL would run another set of computations on the assumption of a .05 eccentricity and come up with a new estimate of probable success.

c. The fuel mixture ratio question raised by [redacted] would be investigated. 25X1

d. When the results of 6.b. and 6.c. were known BMD, STL and Lockheed would seek agreement prior to the July 14 meeting in Washington.

e. On account of the new range safety computations required by the changed azimuth, the next firing date must be put over to July 24th.

[redacted] 25X1

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LOCKHEED PROPOSAL - 90% Probability

				RJ1	RP1
	Fuel to be used			RJ1	RP1
	Injection Velocity			26180	26180
	Altitude			120	120
	Eccentricity			.05	.05
	Empty wgt orbit vehicle			1753	1692
	Weight reduction			62.8	105.5
Immediate for next flight	Trim structure		3.0		
	Inverter heat sinks		3.0		
	Slosh balls		12.0		
	Acquisition beacon battery		9.0		
	Recovery body				
	Film	10			
	Ballast	5			
	Die	2			
	Coolring	1.2			
	Torque motor	1.1	19.3		
	Solar reset of timer		5.0		
	1800" titanium sphere		7.0		
	Ground plane		1.0		
	Turbine exhaust heat shield		1.5		
	N_2 expansion chamber		0.5		
	Separation monitor		1.5	62.8	62.8
Up to 2 months	SS/C Revisions				10.0
	Paint				2.0
	Hydraulic mounting plate				2.0
	Environmental measurements				3.0
	Longitudinal acceleration pressure measurements				1.2
	Inside vehicle				1.5
	Reduce gauge				15.6
	Move destruct system to new location				8.0
					105.5

Assumption is higher injection velocity rather than higher altitude.

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